APPENDIX 2
Kittiwake Sinking Plan/Vessel Disposal Plan

Kittiwake Project
Vessel Disposal Plan

Wreck positioning & Sinking plan

USS Kittiwake

Seven Mile Beach
Grand Cayman

West Indian Marine Group
West Indian Marine Ltd.

24th June 2008 (revision 7.1)

Vessel Disposal Plan

Sinking Plan & Wreck Positioning

1. Introductory Overview

West Indian Marine Ltd. present this document as their proposal for the sinking of the USS Kittiwake off Seven Mile Beach, inclusive of methodology for the vessel positioning and sinking of the vessel following the arrival of the vessel in Grand Cayman.

West Indian Marine Ltd. is a Caymanian owned and operated local company, specializing in the marine services of towing, salvage, rescue, ship assist, pilotage, tendering, marine contracting, dredging, dredge tendering, marine construction, artificial reefs, seawalls, moorings, docks, marinas, coastal shore protection and beach stabilization. West Indian Marine is the only local Caymanian Company that has both the marine expertise and the marine equipment in the Cayman Islands to carry out this project.

This vessel disposal/sinking plan is proposed, based on general information, photos and details provided in the invitation to tender document for the USS Kittiwake project together with inspection of the vessel in the USA at Norfolk, Virginia, and conversations with the CITA managers of the project and the CIDOE. This proposal is also based on the vessel having full preparations completed in the shipyard which is contracted to carry out Phase I of the project tender, including but not limited to the installation of air vents and air vent holes, internal flooding ports and vent holes together with all internal diver access holes fitted. West Indian Marine would require detailed discussions and agreement with the managers of the project, following a pre-commencement inspection of the vessel in the USA concerning the extent of work to be done prior to the commencement of Phase 1 of the project. A pre-delivery inspection would also be required prior to towing the vessel to the Cayman Islands. West Indian Marine has been advised by the CITA that a hull survey was conducted in Virginia for the initial inland tow of the vessel to the Dominion Marine Group shipyard by Captain Don "Chip" Kinsey, Coastal Marine Surveys, Captain Andrew Kinsey, Coastal Marine Surveys and Captain Steve Thorton, American Marine Towing on February 28th, 2008. This survey is attached as Appendix 1. A further survey will be conducted for the international tow, after the remediation and preparations work has been completed in the USA.

West Indian Marine Ltd's disposal plan includes towing, handling and delivery of the vessel from George Town Harbour including stand-by services, positioning and securing of the vessel off Seven Mile Beach and then the controlled sinking of the vessel at the site with the most environmentally safe disposal of the vessel as is possible.

We are confident that we can position the vessel and carry out the controlled and accurate sinking of the vessel taking every precaution to protect nearby coral reefs, adjacent coral beds and the marine environment in close proximity to the site off Seven Mile Beach.

2. Vessel Particulars

The USS Kittiwake 251 is a Submarine rescue / Submarine tender vessel. The vessel is a single screw Chanticleer Class Submarine Rescue Vessel commissioned for service in 1944. The vessel's structure is reported to be in good condition and all DB tanks are either ballast or fuel bunker tanks which have been reported as having all light marine diesel bunkers removed from these fuel tanks. The bow comprises of a lower forepeak ballast tank and an upper deck store with anchor chain lockers.

General particulars:

Length LOA	251.33ft
Length BP	Unknown
Breadth Moulded	42.0 ft
Depth Moulded	Unknown
Max Draft – SLL	16.0 ft
Tonnage LWT	Unknown
Tonnage DWT	2,045.00 tons
Gross Tonnage	Unknown
Net Tonnage	Unknown
Propulsion	Diesel Electric
Horsepower	3000 HP
Built	Moore, Savannah
Year of Build	1944
Call Sign	Unknown
IMO #	N.A.
Official #	Unknown
Class	US Navy

3. Current Status of the vessel.

The vessel is currently located at anchor, laid up in the James River Reserve Fleet at Norfolk, Virginia, USA.

Following official hand over of the vessel by MARAD to the Cayman Islands Government, it has been documented that the vessels cleaning, preparation and remediation work in accordance with Phase 1 of the project works will be carried out by Dominion Marine Group, who is in close proximity to the vessel's lay up location in Virginia. It is reported that Phase 1 of the project will include the removal of all fuel from the vessels double bottom fuel bunker storage tanks, and the fuel settling and fuel daily service tanks, together with all oil from the vessel's L.O. storage tanks and the vessel's main engine, generators, air and AC compressor crankcases and electrical transformers.

West Indian Marine have assumed in their tender response that the environment cleanup and preparation of the vessel including fuels, oils, lagging, PCBs, lead ballast, etc. etc. etc. will fully and completely be carried out in Phase I of the project works, prior to the vessel departing US waters.

4. Prevailing weather conditions

The sinking site is off Seven Mile Beach on the west coast of Grand Cayman in the lee of the normal prevailing easterly trade winds swinging between the NE to East to SE quadrant for most of the year. Adverse weather conditions generated by cold fronts moving from west to east out of the US/Mexican Gulf during the winter months from mid November to the end of April will affect the site during these months.

Adverse weather conditions can range from strong winds from the North through East quadrant or very high seas and strong winds from the Northwest to Northerly quadrant (commonly called Nor'westers). The annual hurricane season for the Caribbean Basin officially commences in June every year however hurricanes rarely affect the Western Caribbean until late August into September and through to November of each year.

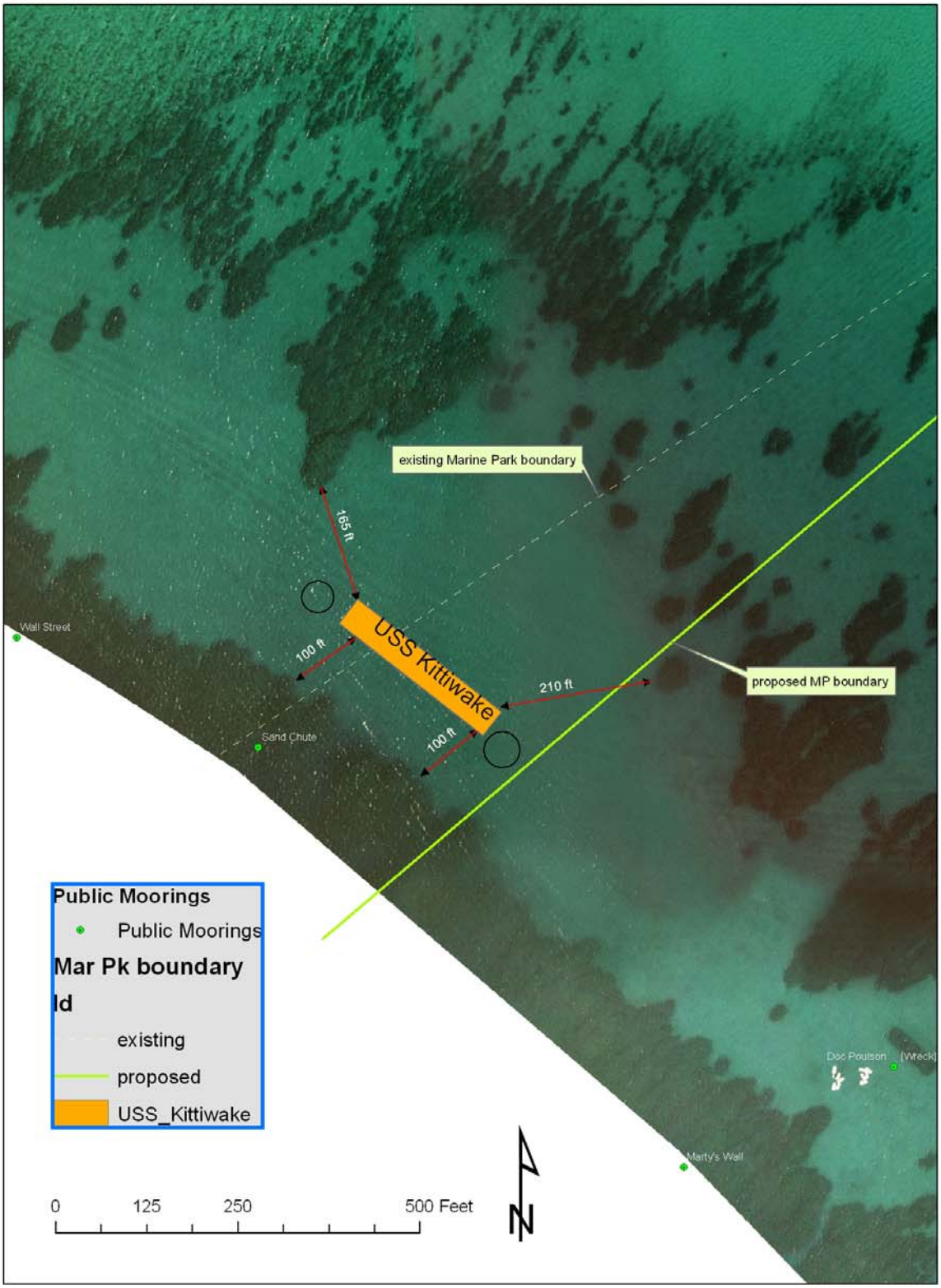
Prior to any work being commenced after the arrival of the Kittiwake in Grand Cayman, weather conditions will be assessed for the upcoming 10 day period. Should any incumbent weather be forthcoming, the Kittiwake will stay on anchor with its water tight integrity intact, or stay under tow if need be in severe weather conditions. Incumbent weather shall include winds from the N, or NW greater than 10 knots and/or sea conditions on the West side with wave heights greater than 2 feet.

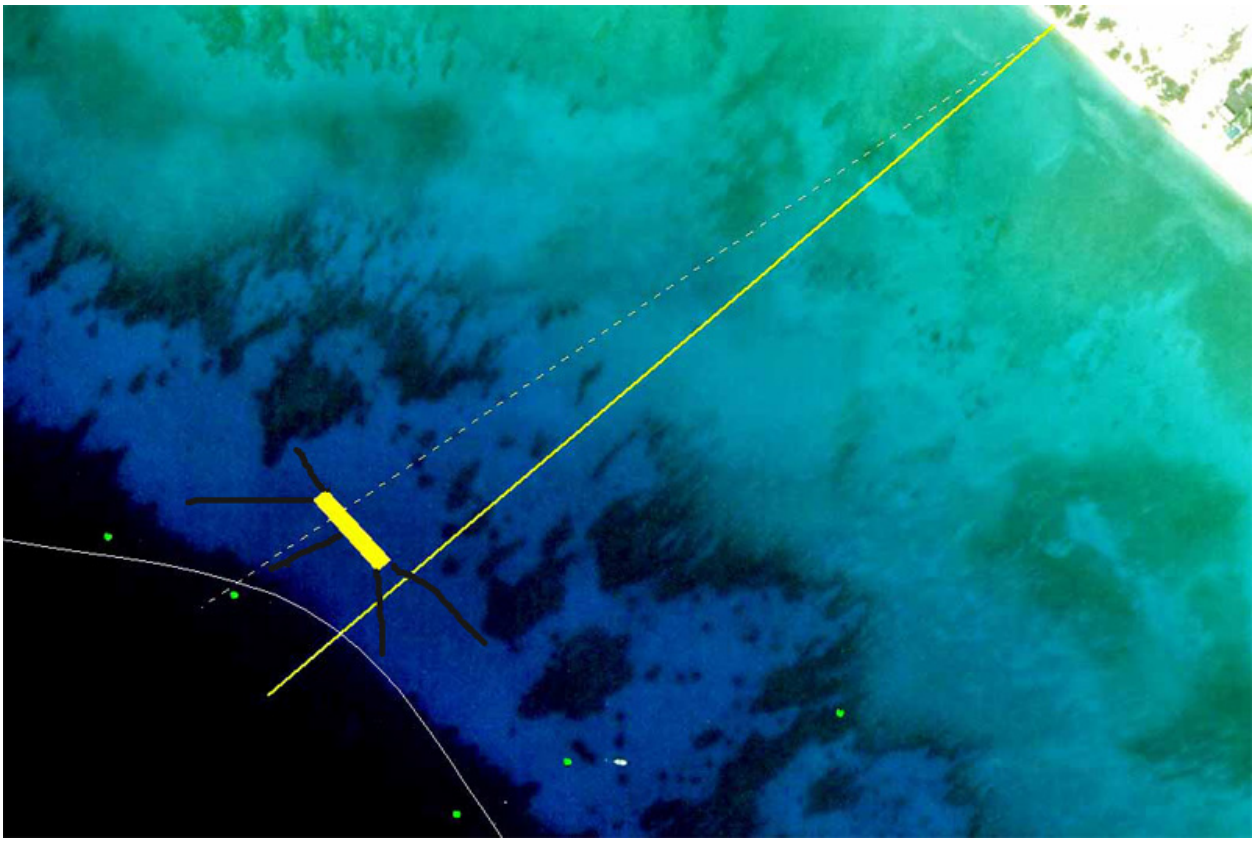
The vessel's sinking site lays in an approximate north to south direction off the leeward side of Grand Cayman as designated and approved by the CIDOE and the Cayman Islands Port Authority and it is intended to sink the vessel with the bow pointing as close as possible to the

north west and the stern towards the shore in a northwest to south easterly direction off Seven Mile Beach at the GPS coordinates of:

Latitude:	19 21.714’N	081 24.073W Bow
Longitude:	19 21.688’N	081 24.044W Stern
Sea Reference:	The site is located just off of the Sand Chute Dive Mooring	
Bottom Composition:	The area is very flat with a sand bottom	
Depths:	Stern: 56 feet	Bow: 64 feet
Maximum vessel height after remediation:	48 feet	
Minimum draft clearance:	14 feet	

Proposed Site of Kittiwake Wreck





5-point Anchor positioning at the Kittiwake site

5. Technical Overview & Methodology

The exact location has been finalized and agreed, for the sinking of the vessel and considering the close proximity of the site to natural coral reefs and that it is located in a protected underwater marine park environment off Seven Mile Beach in Grand Cayman, Cayman Islands. West Indian Marine Ltd. have devised a sinking plan for the vessel utilizing a combination of controlled mechanical flooding and a five point anchor positioning and securing methodology.

The proposed plan for sinking the vessel is based on the vessel's water tight integrity of the hull being maintained until the vessel is securely anchored into position at the site. The lower half of the vessel's hull will be water tight at all times, to maintain controlled flooding and the structural integrity of the hull after sinking. Diver access holes will be cut into the port and starboard top sides of the vessel's hull after the five point anchoring system has been deployed and secured. This allows for the controlled flooding of all compartments, spaces and tanks throughout the vessel, whilst maintaining control of the buoyancy, trim and heel of the vessel throughout the sinking operation.

Preparations would be made both in the USA during Phase 1 remediation before delivery of the vessel to Grand Cayman and prior to commencing the sinking operations in Grand Cayman.

Sinking operations will be carried out utilizing controlled tank and space flooding with portable mechanical pumps for the monitored varied flooding of the vessel. Pumps can be turned on and off as required in order to maintain the heel of the vessel and achieve a controlled sinking. Initially, all tanks and small compartment spaces throughout the entire length of the vessel will be flooded. These are characterized as small spaces that are more difficult to flood and predominantly on the lower decks and bottom hull area. Following all small spaces and tanks being flooded the large compartment spaces of the vessel will then be flooded. Effective flooding operations are directly related to preparations for the efficient venting and removal of air entrapment from all tanks and compartment spaces. Internal tank, space flooding and venting ports will be installed throughout the vessel in all bulkheads (except for 3 bulkheads which will remain intact for water tight integrity for towing) and deck levels in the USA during Phase 1 preparations, prior to towing the vessel to Grand Cayman. The preparations will be inspected and approved by West Indian Marine prior to the vessel's tow from the USA to the Cayman Islands.

Appendix 2 shows the general arrangements of the Kittiwake on a deck by deck basis and the location of all air vents and diver cutouts in the vessel. *This Appendix has been provided to the CIDOE, MARAD and EPA in hard copy large scale paper format due to the size and legibility of the data, and in included by reference as a part of this plan. The annotated general arrangements show seawater ballast in areas including the double bottom fuel tanks where it should show potable fresh water. This will be amended in the final annotated general arrangements following the next site visit to the Kittiwake, including any other minor modifications needed, prior to the Kittiwake export from the US.*

Preliminary on-vessel walk through and discussions have taken place between West Indian Marine and Dominion Marine Group as to the general location of all internal venting ports, bulkhead cutouts and venting ports. A detailed vessel inspection will be conducted in Virginia at the Dominion Marine shipyard, following transfer of the vessel from MARAD to the Cayman Islands Government. At this time, the vessel will be visually marked for all specific locations of all vents and diver access cutouts that West Indian Marine will need for sinking purposes, along with stowage of anchors for the five point anchoring system of the vessel at the sinking site. Consideration on the exact positioning of each diver access hole, cutout and air vent will take into consideration allowing water movement during flooding, anticipating the need to reduce flooding in a given area while increasing it in another area to maintain the trim of the ship while sinking and flooding activities occur.

The vessel will be positioned afloat at the site secured by a 2 fore, 2 aft and 1 offshore for a total of a five (5) point anchoring system, and the following procedures would be carried out in due process.

No work will commence on the sinking of the Kittiwake until the CITA has provided West Indian Marine with an approved Coastal Works Permit and Ocean Disposal Permit.

The vessel has been divided into Decks and Compartments for easier reference and include. A schematic of the Kittiwake is attached as Appendix 2. This identifies the location of all water-filled compartments, diver access holes and air vents. Minor modifications may be made to this plan following the vessel remediation and preparation in the USA and will be updated on the schematics at that time prior to the final preparation work in Cayman. Additionally, diver access to the second and third platforms will be added if needed after stairwells, ladders and the like have been removed.

<table>
<tr><td>5.1</td><td>Vessel General Arrangements</td></tr>
<tr><td>5.2 Decks</td><td>Decks from top to bottom:

<table><tr><td><u>Names of the decks</u></td><td><u>Found on General Arrangements</u></td></tr><tr><td>Upper Bridge Deck</td><td>2nd & 3rd Levels</td></tr><tr><td>Bridge Deck</td><td>2nd & 3rd Levels</td></tr><tr><td>Boat Deck</td><td>2nd & 3rd Levels; First Level</td></tr><tr><td>Main Deck</td><td>First Platform “A”</td></tr><tr><td>Fuel tanks; Forepeak</td><td>Inner Bottom & 2nd Platform B</td></tr><tr><td>Inboard profile</td><td>All decks – cross section</td></tr></table>
[Decks are denoted in yellow on the General Arrangements and found on the in-board profile of BUSHIPS NO. ASR 13 – S0103-671735]</td></tr>
<tr><td>5.3 Compartments</td><td>Compartment Identification

Compartments 1 – 7 from Bow to Stern:

[Compartments are denoted in orange on the General Arrangements and found on the in-board profile of BUSHIPS NO. ASR 13 – S0103-671735]</td></tr>
</table>

6.	**Preparation Work in George Town Harbour**
6.1 Location	The location of the initial preparation work (as defined below prior to moving the vessel to the sinking site) will be alongside the North berth at the port in George Town. Failing approval from the Port Authority to berth at the port, the West Indian Marine Mooring in George Town Harbour will be used for the initial viewing and preparation work. In either event, a tug will be standing by the vessel at all times.
6.2 Debris removal & disposal	The removal of unnecessary equipment, spoils, debris and materials from the deck and compartments of the vessel will be carried out by crane and equipment on the tug/utility vessel MT Sand Cay and the construction spud barge Duck Pond Cay. All debris and metal plating materials removed will be taken to the CI Dump and disposed of in a proper manner. This will be predominantly metal plates and cutouts.

6.3 Internal cutting of lower vents & flood holes	Lower internal space flooding holes and upper air vent holes will be cut into each watertight bulkhead throughout the vessel allowing space to space flooding and air venting throughout the entire length of the vessel. [*All inter space or internal space to space flooding holes and air venting holes will be cut out or installed in the preparations during Phase 1 of the project in the USA. Three water tight bulkheads will remain sealed and water tight for the tow from the USA to Grand Cayman.]* *[These holes are denoted in pink on the General Arrangements and found on the First platform A, Inner Bottom & Second Platform B & the inboard profile that is not exposed to any external area on BUSHIPS NO. ASR 13 – S0103-671735]*
6.4 Removal of temporary covers	Unsealing and removal of the purpose fitted, flooding entries and air escape vents to all compartments and tanks will occur. During the remediation phase in the USA, air vents and diver access cutouts will be completed inside the vessels hull and above deck. Some of these cutouts will be on the top deck and will be resealed for water-tight integrity for the tow to Cayman. The temporary covers will be unsealed and removed from all compartments and tanks that were temporarily sealed. This will minimize the cutting and time requirements for work in Cayman. *[These holes are denoted in pink on the General Arrangements and found on the Main Deck and weather exposed areas of the First platform A, the Boat Deck and the inboard profile that is not exposed to any external area on BUSHIPS NO. ASR 13 – S0103-671735]*
6.5 Flooding deep tanks	Deep Tank manhole covers will be removed to check that the fresh potable water levels are full and any additional water needed to top off the tanks will be added. The deep tank manhole covers will be replaced to prevent diver entry into those spaces, in preparation for flooding of those tanks. *[denoted in lime green on the General arrangements found on the in-board profile of BUSHIPS NO. ASR 13 – S0103-671735]*
6.6 Flooding fuel tanks	Double Bottom fuel tanks will opened to check that the fresh potable water levels are full and any additional water needed to top off the tanks will be added. The tank manhole covers will be replaced with the manhole covers remaining in place at all times. *[denoted in lime green on the General arrangements found on the in-board profile of BUSHIPS NO. ASR 13 – S0103-671735]*
6.7 Cutting additional bulkheads	Internal watertight bulkheads will be internally opened. Compartment diver access holes, internal flooding and air vent holes will be cut and installed as found necessary. *[Cutouts for watertight bulkheads are denoted in pink can be found throughout Compartments 1 – 7 and found on the in-board profile of BUSHIPS NO. ASR 13 – S0103-671735]*
6.8 External diver & flooding holes	Diver access and flooding holes cut on the exterior hull, once in position at the sinking site, will be cut on the lee side first, then the weather side, with time being of the essence once the cutouts are done close to the waterline. *[Cutouts for the exterior hull are denoted in pink can be found throughout Compartments 1 – 7 and found on the Bridge, Upper Bridge and Main decks of the 2nd & 3rd levels of*

	BUSHIPS NO. ASR 13 – S0103-671735]
6.9 Watertight integrity until at sinking site	No diver access holes will be cut into the port and starboard topsides of the vessel prior to towing and securing the vessel at the sinking site. This will insure the water tight integrity of the hull for the short tow from George Town Harbour to the actual sinking location.
6.11 Final cleanup of debris	General clean up of the vessel will be performed to remove all debris from the vessel prior to proceeding to the site for the sinking of the vessel. The barge will have a skip/container for temporary storage of all metal/debris removal.
6.12 Vacuum clean of bilge tanks	Any remaining bilge water inside the vessel will be vacuum extracted into a tanker truck prior to taking the vessel from the George Town dock (or West Indian Marine mooring) site to the sinking site.
6.13 Fire Watch	A fire watch will be maintained at all times when hot work is in progress. Fire extinguishes will be available and on hand at all times.
6.14 Plasma Cutters	Cutting will be accomplished using plasma cutters that provide clean cuts, and will minimize the fire potential having reduced hot metal debris. All cutting will be done from the outside in, using the barge when appropriate as a working platform, so that the minimal debris created will be inside the vessel and not external to the vessel. This methodology will insure that neither metal plates nor cutouts external to the vessel will enter the water other than inside the vessel. All large plates to be cut will have pad eyes welded onto them for handling and storage on the barge for disposal.
6.15 Duration in George Town Harbour	Preparations of the vessel alongside the dock in George Town are expected to take two to three days. However no preparation work will be able to commence until all social activities and events following the arrival of the vessel in George Town are completed and the public is restricted from being onboard or visiting the vessel.
6.16 Site survey and visual markers	A site survey will be completed prior to the Kittiwake arrival in Grand Cayman. The bow/stern and port/starboard location of the vessel will be visually marked on the ocean bottom, as well as a visual marking for the location of each of the 5 anchors. This will facilitate the sinking of the Kittiwake and its anchors in the correct positions.
7.	**Preparation Work at Sinking Site**
7.1 Placing anchors	There will be a total of 5 anchors of approximately 4,000 – 5,000 pounds each to secure the Kittiwake. The anchors are located: bow anchors (2), stern anchors (2) and amidship anchor (1) with 1.25” minimum to 1.5” maximum stud link anchor chain. The chain will be ranged out and positioned from the bow, stern and amidship of the vessel once at the site to provide a secure five point anchoring of the vessel. This will prevent vessel drift and movement together with ensuring the accuracy of the sinking of the vessel.
7.2 Anchoring method	The anchors will be carefully positioned using air lift bags to safely move and position the anchors on their visual markers, thereby eliminating the practice or

	need to drag anchors across the sea bed into the desired locations for these moorings.
7.3 Purpose of anchor system	Five anchors and chain will be ranged out and secured to the vessel fore and aft, two from the bow and two from the stern and one from the port side amidship, all having chain ranged out as much as possible to prevent any deviation from the required sinking location at the site. The five point anchoring system also provides stability to the vessel during the flooding process by limiting fore and aft trim variations and restricting some degree of heel during the sinking of the vessel. The anchors will be positioned in such a manner as to reduce seaward movement.
7.4 Hull cut-outs	External cutting of the port and starboard topsides of the vessel's hull above the waterline will be carried out to install 1.5 metre diameter diver access holes in designated positions along the topsides of the hull to provide diver access to all compartments (except double bottom tanks) in the vessel after sinking. Diver access holes will be cut at the same levels of no less than 1.0 metre above the waterline along the hull sides. Cutting of all port and starboard topside diver access holes will be carried out at the sinking site following the installation, positioning and securing of the five point anchoring system on the vessel. *[Cutouts for the exterior hull are denoted in pink can be found throughout Compartments 1 – 7 and found on the Bridge, Upper Bridge and Main decks of the 2nd & 3rd levels of BUSHIPS NO. ASR 13 – S0103-671735]*
7.5 Buoyancy added to main deck level and above	Buoyancy will be secured to the main decks levels and above by attaching lift bags equal to 100,000 pounds of lift to the deck area. This will assist in the sinking process to counteract any capsize motion.
7.6 5th anchor installation	A determination will be made as to whether the 5th anchor amidship should be ranged out during sinking or attached after the fact. The considerations are the weight of the anchor and if it would contribute to the ship rolling or if it will assist in the stabilization of the sinking. The intent of the 5th amidships anchor is to stop movement of the ship in towards shore after sinking.
8.	**Sinking Operations**
8.1 Flooding operations	Compartment space and tank flooding, utilizing both controlled gravity and mechanical pump flooding will occur. Mechanical flooding will be stopped and started as required to ensure the controlled and level flooding and good trim of the vessel at all times. Flooding will be effected by the use of eight 3" and 4" portable pumps (with an additional two 2 spare pumps for stand-by) with maximum discharge rates of 350 – 550 gpm. The pumps will be monitored with discharge rates varied as needed to maintain the vessel at an even keel by personnel at all times. Estimated flooding rates will be up to a maximum of 168,000 gph or the equivalent of 840 tons per hour. The vessel's sea cocks and internal flooding valves will not be used, as access to these valves are sometimes restricted in the flooding process which can prevent accurate and controlled flooding of the vessel at a limited area site such as the site chosen for this vessel.

8.2 Duration of sinking	It is estimated that the sinking time for the vessel, once flooding has started, will be between 3 to 5 hours.
8.3 Duration of prep work	Preparations at the sinking at the site are expected to be two days in duration from arrival at the sinking site to having the vessel sunk and sitting on the sea bed at the site.
9.	**General Information on Sinking Operation**
9.1 Crowd control & safety perimeter	The Port Authority's two port patrol boats and personnel will be engaged to control and police marine traffic and the public around the vessel, while sinking operations are underway at the sinking site.

9.2 Relevance of Stability Data	IMPORTANT: - It is important to note in the review of this sinking plan that the vessel's original hydrostatics, original inclining experiment results and general in service stability data and calculations can not be considered in this case as they have become redundant due to the project preparations of opening the vessels internal water tight bulkheads, tanks and hull top sides with large diver access holes cut into the structure for recreational scuba diving access as a dive site, following the sinking of the vessel at the site.
9.3 Use of vessel for pumping operations	Three tender/work boats, the tug/utility vessel MT Sand Cay and the construction spud barge Duck Pond Cay will standby the vessel during the flooding process to ensure the continuous and accurate, controlled flooding of the vessel. Each vessel will utilize mechanical pumping to fill the largest compartments of the vessel with the internal flooding of the smaller compartments achieved through internal inter-compartment flooding and venting holes having been pre-installed prior to the flooding process. Stand-by vessels and equipment will not be attached to the vessel in any way during the sinking process. All vessels will be operational, manned and on engines maintaining position pressing against the hull of the vessel until required to pull back as the vessel sinks.
9.4 Placement of flooding hoses	All flooding hoses will not be attached to the vessel in any way during the flooding process and will penetrate loosely into the hull through large diver access holes only. Length of hose inside the vessel will be no more than a maximum of 1.0m of hose length and will be able to be removed quickly as the vessel's hull sinks under its own flooded weight.
9.5 Communication Plan	Continuous communications via VHF radios and cell phones will be maintained at all times during all facets of the preparations and sinking processes. VHF channel 12 will be the operating channel for all communications during the sinking of the vessel.
9.6 Range of vessel drift during sinking	The precautions taken and the additional efforts engaged using a secured five point anchoring system in this sinking plan ensure that the vessel cannot move or drift from the site to endanger or damage the surrounding marine environment during the flooding and sinking process of this project. Five tensioned anchor chains attached to the vessel floating at the site will allow only an estimated maximum of 9.0m drift of the vessel's final resting position on the sea bottom at the site. *[This is the accepted variance from the location of the visual markers as referenced in 10.3]*
9.7 Possibility of visible oil sheen	It is expected that there may be a very slight sheen on the water directly after sinking from possible petroleum residue however any surface sheen resulting from the sinking would be no where near the extent of surface sheen on the water after rainfall washes off the George Town dock in GT Harbour. If any sheen, it will be light diesel fuel and not heavy oils, and will quickly dissipate.
10.	**Post Sinking Operations**
10.1 Tensioning of anchors	Following the completion of the flooding and sinking of the vessel onto the sea bed at the site, all five anchors securing the vessel will be re-tensioned using the

	tug/utility vessel MT Sand Cay to set the anchors into their final positions to secure the vessel under a tensioned five point anchoring system. Should there be insufficient room to tension the anchors by line directly to the tug then air lift bags will be utilized to assist in the moving and tensioning of the anchors. Some curve will be retained in each anchor chain attached to the vessel to handle high shock loads under tension during storm or hurricane events.
10.2 Post sinking safety inspection	Final inspection of the vessel will be carried out after the sinking operations have been completed to ensure that the vessel is safe for recreational diver access. A further day would be required to carry out this full and final safety inspection and the securing of any loose items found prior to clearing the wreck for public recreational diving access at the site.
10.3 Post sinking location inspection	The visual inspection on the vessel will include verification that the vessel is within the accepted drift range of the visual markers, and that the anchors are located on their visual inspection markers. Verification and inspections will approve that the vessel is sitting in its intended upright position. Should this inspection not pass acceptance by the CIDOE, then the vessel or anchors will be relocated to the intended sinking site correct positions, or righted, as the case may be.
10.3 Installation of marker and buoys	During the final inspection of the vessel and simultaneous to the inspection, four (4) to six (6) dive/snorkel boat moorings will be installed by CIDOE and 1 Navigational Marker will be installed by the Port Authority. Pre-welded secure pad eyes for the connection of these moorings will be installed on the vessel during phase 1 of the vessel preparation in the USA, with shackles, lines and mooring balls/navigational markers prepared in advance to install once the vessel is cleared for safe access. West Indian Marine is available and capable of installing these under separate contract, should the CIDOE or Port Authority wish this to be done.

11.	**Towage / Utility - Stand-by vessel operations**
11.1 Tug standby	Simultaneous to the above sinking methodology, West Indian Marine would position our tug/utility vessel to stand-by amidships at the vessel to maintain position and stability during the flooding operations. The West Indian Marine tender/work vessels would also maintain positioning of the vessel fore and aft during the flooding process and provide mechanical pumping of sea water for flooding spaces on the vessel.
11.2 Water pumps	Water pumps will remain working and/or be available onboard the West Indian Marine barge anchored adjacent to the vessel during the flooding and sinking of the vessel.
11.3 Securing Anchors	Once the vessel has sunk into position, the securing anchors would be repositioned and ranged out with anchors and chains tensioned. The West Indian Marine vessels and equipment would remain on site following the sinking of the vessel to monitor and inspect the vessel after the bedding in process and final securing of the vessel has been completed.

11.4 Removing trapped air	Should assessment of the vessel after inspection following the sinking conclude that additional venting of small trapped air pockets is required, West Indian Marine will evacuate these small pockets of air found after sinking.

12**. Mobilization**

West Indian Marine Ltd. will mobilize one shallow draft salvage tug/utility supply vessel with a hydraulic crane and a hydraulic A-frame gantry, capable of anchor handling and equipment handling, together with support equipment including a 60ft x 24ft equipment spud barge and three small line tender workboats.

An extensive array of diving equipment, portable salvage equipment, including but not limited to generators, pumps, diesel driven, lighting towers, pontoon lift bags, welding machines, plasma cutters, mixed gas cutting, etc etc etc. will be mobilized.

13. Insurance and Indemnification

a) At all times during the course of this work effort, West Indian Marine will maintain adequate third party and worker liability insurance, with the Cayman Islands Tourism Association and the Cayman Islands Government listed as co-insured on the policy.

b) At all times during the course of the work effort, West Indian Marine will maintain an insurance policy in the amount of US$1.2 million that will cover wreck removal, total loss of the Kittiwake or inadvertent sinking and salvage requirements, until the Kittiwake is sunk and located in the correct position. A copy of the insurance will be provided to append to the Coastal Works License.

c) The Cayman Islands Tourism Association (CITA), the Cayman Islands Government (CIG), the Maritime Administration (MARAD) and the United States of America will be listed as co-insured on the insurance policy from West Indian Marine.

d) West Indian Marine will use only qualified, licensed and insured personal for this project. Best efforts and rigorous monitoring will be used in all instances, but in no event will West Indian Marine be liable for damage to natural coral reefs except through acts of negligence.

14. Personnel – Sinking/salvage crew

Key personnel provided by West Indian Marine Ltd. have association with United Salvage previously of the Howard Smith Group which has been acquired by the Adsteam Group, and later by Svitzer. Both of these companies are International towage and salvage operators. West Indian Marine has alliances with Dominion Marine contracted to carry out Phase 1 of the project and Resolve Marine. The following personnel will form the core of the salvage crew required for the preparation, handling, positioning and sinking of this vessel at the site;

a) One salvage master – John MacKenzie; West Indian Marine Ltd.
b) One assistant salvage master/supervisor – On staff at WIM plus Tim Mullane from Dominion Marine Group (temporary work permit)
c) One salvage vessel master – On staff at WIM
d) Three salvage welder/cutter/mechanics – 1 on staff at WIM with 2 local sub-contractors
e) Three salvage divers/mechanics/crew – On staff at WIM – commercial divers
f) Two general salvage hands/crew – On staff at WIM

Resumes for John MacKenzie and Tim Mullane have been provided. Additional staff used will insure that the appropriate qualifications for the job at hand are met. The CITA will be responsible for the work permit for the single (1) staff member brought in from off island from Dominion Marine who is the contractor carrying out Phase 1 & 2 of this project. The above personnel are inclusive of the normal working compliment of crew onboard the salvage utility vessel.

15. Portable salvage equipment

The portable equipment provided below is included but not limited to the following;

a) 2 x Diesel driven welders and plasma cutters
b) 1 x Crane and lifting gear and rigging
c) 1 x Gas driven small generators
d) 10 x Gas driven centrifugal pumps (8 being operation and 2 for standby)
e) 4 x Electric submersible pumps
f) Assorted chain and cable pullers, cumalongs and lifting blocks
g) 2 x Hookah diving compressors
h) Diving gear
i) Underwater diver's communications
j) 10 x General VHF communications
k) 2 x Diesel driven lighting towers
l) Electrical portable flood lighting
m) 1 x large garbage skip container
n) Anchors, chain, buoys and assorted mooring equipment
o) Assorted ropes, wire slings, lashings and soft straps and lifting gear.
p) Sealing and patching materials including gasket materials, and sealing compounds.
q) Assortment of hand and power tools and equipment
r) Underwater Hydraulic power tools
s) Oil spill, pollution control and removal materials.
t) Gases, gasoline and diesel fuel.

14. Scope of Work

1. Initial survey & evaluation of vessel to ascertain current status & establish an update of the condition of the vessel following delivery to George Town
2. Review weather conditions and make a go/no go decision to proceed
3. Organize and mobilize portable equipment, materials and supplies
4. Mobilize floating equipment
5. Mobilize salvage crew
6. Install safe moorings
7. Transfer equipment to the vessel
8. Prepare vessel for sinking/flooding
9. Range out vessel's anchors and chain
10. Clean up the vessel and remove equipment
11. Prepare vessel for sinking
12. Position tug to standby the vessel
13. Commence gravity and pump flooding of all spaces
14. Maintain stability of the vessel with reduced buoyancy
15. Stabilize and trim vessel with controlled flooding
16. Monitor sinking of the vessel onto sea bottom
17. Adjust and re-position all anchors fore and aft and tension all anchor chains for secure anchorage of wreck onto the sea bottom.
18. De-mobilize floating equipment, portable salvage equipment, salvage crew and personnel

17. Sinking Schedule

West Indian Marine will commence mobilization immediately upon 48 hours notice prior to the arrival of the vessel off George Town. West Indian Marine estimate that they will be onsite to commence sinking operations directly following the delivery of the vessel into Cayman waters.

Sinking operations are expected to be continuous and without delay, however some functions of the operation are expected to be re-scheduled subject to the prevailing weather conditions at the time. It is estimated that pre-sinking social events, pre-sinking preparations and inspections of the vessel will take no more than 10 days requiring tug and equipment standby. Preparations prior to proceeding to the sinking site will take a full two to three days. Sinking operations at the site will take less than 2 days conditional on noted preparations being carried out in Phase I and dependant on the number of external hull "diver access" holes required to be cut above the water line of the vessel prior to sinking at the sinking site.

Phase III – Sinking

Time Line Day >>	1	2	3	4	5	6	7	8	9	10	11
Kittiwake Arrival in Cayman											
Release US Tug Boat from service to WIM											
Berth or Anchor in George Town Harbour											
Media/Public visitations											
Kittiwake Preparation work											
Tow to sinking Site											
Kittiwake Preparation work											
Sinking											
Inspections, clean up											
Installations of Moorings											
Open to Public											

18. Stand-by at sea off George Town

West Indian Marine in their bid for this portion of the work, shall stand by the vessel for the scope of work defined herein. However should the vessel have to be taken to sea under tug/tow at any time, the stand-by daily hire rate will be applied excluding fuel, with fuel cost being invoiced as an additional charge. Stand-by should not exceed more than 10 days of display, inspections and preparations.

19. Company Statement

West Indian Marine Ltd. is a Cayman Islands based and registered company specializing in salvage, towage, marine services, marine construction and marine contracting. The company's work includes salvage, general towage, anchor handling, buoy handling, marine services, vessel assist work, ship tendering, marine construction, sheet piling, seawalls, marinas, docks, man made underwater reefs (Reef Balls), coastal shore protection, beach stabilization (ProTecTube), moorings, navigational aids and markers, and dredge tendering.

Principals and personnel employed by the company include persons possessing vast shipping and marine engineering experience, an 'ex' American Bureau of Shipping (ABS Class) surveyor, commercial divers, offshore oil industry saturation deep diver, vessel operators master mariners and salvage experts together with backup and support from Svitzer, Resolve and Dominion Marine.

West Indian Marine Ltd. submits this proposal as a single company submission with West Indian Marine as the sole contractor, however West Indian Marine have close working relationships with two other marine contractors in close proximity to the Cayman Islands. We are well connected in the western Caribbean and throughout the USA, Cayman Islands, and Honduras. We are both familiar and well versed in working in the area and especially around Cayman Islands waters.

West Indian Marine staff, personnel and labour can work in the Cayman Islands without restriction. The company works predominantly in coastal and inland waters, environmentally sensitive coastal marine locations, marine national parks, reserves, and around the protected coral reefs of the Cayman Islands.

We trust you will find our "Sinking/Wreck Positioning Plan" for the USS Kittiwake satisfactory with every precaution considered. Should you have any questions or require further information and details about any aspect of our "Plan", please do not hesitate to contact us and we will endeavour to assist you in any way we can.

Yours Sincerely,
West Indian Marine Ltd.

_____

John MacKenzie
Managing Director

West Indian Marine Barge

West Indian Marine Tug

Curriculum Vitae

John Stewart MacKenzie

MRINA, MIMarEST, MPDAA, MIME

P.O. Box 31194 SMB. Grand Cayman, Cayman Islands, B.W.I.
Tel: 1(345)9457126 Bus - Fax: (345) 9450613 Cell: (345) 9161555
e-mail: john.mackenzie@wimarine.com

Professional Resume

Name:	John Stewart MacKenzie
Nationality:	Australian, Caymanian & British/EU
Residence:	Grand Cayman, Cayman Islands, B.W.I.
Age:	55 Years, DOB 12th January, 1952
Maritime Experience:	37 Years – Maritime Industry
Geographical Areas of Work:	World wide total of 34 years - Caribbean / USA 22 Years
Professional Achievements:	Youngest seagoing First Class, Steam & Motor, - Chief Marine Engineering Officer, Australasia. 1978
	Youngest American Bureau of Shipping surveyor Australasia. 1979/1980/1981.
	Youngest General Manager/Divisional Manager in Brambles International & Brambles Industries Australia. – Brambles Shipping Division 1984/1985/1986

Innovator and designer of a series of highly efficient and technically advanced multi-purpose/container

'Super Feeder Vessels' 950, 1210, 1510 & 1750 teu, multi-purpose, geared combination carriers, & container feeder vessels. 1994/1995

Personal Achievements:	Australian National, NSW State & USA hang gliding champion Runner up (2^{nd}) in World hang gliding championship 1973/74
Professional Credits:	Responsible for the re-introduction, construction and implementation of Z-peller tractor tugs and bow traction winches into the Australian towage industry. **Brambles Marine Division / Fenwicks 1981/1982**
	Responsible for the introduction, establishment and initial business development of one of the most successful shipping operations in Australia. Responsible for the introduction and implementation of new double stacked roll trailers & ro/ro vessel technology into the Australian maritime industry. **Brambles Shipping Division 1984/1985/1986**
	Founding member of the Private Sector Shipping Consultative Committee, advising the Cayman Islands Government & the Cayman Islands Ship Registry. 1994 -2007

Founding member & director of the Cayman Islands Ship Owner's Council advising the Cayman Islands ship registry.

References:	**Jonathan Palmer – Sasco Africa Limited** **Andreas Ugland, Ugland Shipping Group** Barton Kirkconnell – ex Kirk Line, Grand Cayman

Peter Hopkins – Offshore Oil / FPSO consultant - Australia
Russell Steiner - Steiner Shipyards - USA
Gary Pemberton – ex Chairman of Brambles, Qantas and the 2000 Olympic Games - Australia
Malcolm Gibb - Chairman of John While & Co ex Managing Director of Brambles - Australia
John Evans - ex CEO & Director of Howard Smith Industries and the Howard Smith Group
Bill Porritt - ex Principal Surveyor for American Bureau of Shipping for Australasia.
Willem Brinkman - ex Chairman of the North Atlantic Shipping Conference. - UK - Brinkmanship
Bill Bolitho - ex Chairman of Australian National Lines and past director of Brambles – Australia

Background & Experience:

Management background & experience:

Shipping operations & marine based business development and acquisitions
Towage, Salvage & work boat services and marine contracting
Major maritime project management
Vessel management and Port terminal operations management
Vessel new building management
Transportation logistics
Materials handling, containerization and materials handling logistics
Australian coastal shipping, group divisional management (liner shipping)
Caribbean & Cayman Islands liner shipping (Shipping Line/Ocean Carrier) management
Chartering management & vessel sale and purchase
Salvage, towage and barge operations and management
Seagoing onboard vessel management
Trucking and material handling management

Technical background & experience:

Shipping: -	Ship, Port & Cargo Liner Service Management, Ship operations & management, contracts, stevedoring, marine engineering, vessel conversion, re-construction & repairs, maintenance, dry-dockings, crewing, ship chartering & ship brokering (sale & purchase), ship and port agency.
Towage & Salvage:-	Salvage and deep sea, coastal and harbour towage operations Tug design & construction, port, salvage & towage operations, tug and barge construction & conversion, line boats, port services, operation & management
Construction: -	Port facilities & terminals, New ship construction, vessel Dry-dockings, maintenance, modification and retro-fit
Surveying: -	American Bureau of Shipping - Marine & Industrial surveyor

		involved in ship surveys, vessel new buildings, offshore oil industry, towage, salvage, insurance & general surveys.
Transportation:	-	Shipping, marine towage, tug & barges, line boats and trucking
Material Handling:	-	Material handling, palletization, containerization Roll trailers, road trailers, stevedoring, manufacturing, design, Handling logistics, implementation and material transportation
Projects:	-	Design, management & implementation of large maritime projects and port development
Design:	-	Ship design, Shipbuilding, tug design, barges and port design
Commercial Diving	-	Commercial and recreational shallow water diver PADI certified & member of PDAA Australia

Professional and Management Experience

January 2001 to Present — **Cayman Islands – Marine stand-by services, marine contracting, ship assist, marine construction, seawalls, docks & marinas, moorings, Reef Balls, navigational aids, Liner Shipping services & port agency, towage, salvage & line handling, dredge tendering, Coastal shore protection & beach stabilization,**

West Indian Marine Group

West Indian Marine Ltd.
West Indian Shipping Ltd.
West Indian Yacht Services Ltd.
West Indian Towage Ltd.

Managing Director – Principal shareholder of the Cayman based marine group of companies operating in the Cayman Islands only, and specializing in providing marine contracting, marine services, towage, salvage, ship assist, fire fighting, pollution response, marine construction, sheet piling, moorings, coastal shore protection, beach re-nourishment, beach stabilization & protection systems, liner shipping, port agency, marine maintenance & yacht management. West Indian Marine Ltd. have been privately commissioned by residential developments along Cayman's main Seven Mile Beach to submit proposals for the reconstruction, stabilization and re-nourishment of the eroded beachfront and sea walls along Seven Mile Beach. West Indian Marine Ltd. are also currently involved in the construction of sheet piling sea walls and the installation of navigational aids and channel makers for Government, together with docks, marinas and seawalls with all other underwater marine works around Grand Cayman.

West Indian Marine provide emergency response, rescue and salvage services in and around the waters of the Cayman Islands and the western Caribbean region.

West Indian Shipping operate a liner shipping service between Mobile AL., USA and Grand Cayman every two weeks with MCW Shipping and from Jacksonville, Port Everglades Florida and world wide connections every week with SeaFreight Line and ZIM Line.

West Indian Marine Ltd. have the Exxon Mobil "Esso Services Contract" for the provision of ship tendering, stand-by services, towage, fire and mooring line handling at the Esso oil berth and Esso facilities in Grand Cayman. West Indian Marine Ltd. have completed the installation of a "Reef Ball" reef for the Marriott Hotel and the repair of a submarine power cable for Caribbean Utilities Co.

July 2001 to Present **Cayman Islands - Caribbean Basin – Shipping, handling And Distribution of construction aggregates Port design & development**

West Indian Group - Self employed - **West Indian Group Ltd.**
West Indian Equipment Ltd.
West Indian Real Estate Ltd.

Managing Director – Cayman based Group comprising of Andreas Ugland (Ugland Shipping family) and John MacKenzie as principal shareholders, specializing in marine consulting, maritime projects, port development and the shipping, handling and distribution of bulk construction aggregates to the Cayman Islands and throughout the Caribbean utilizing self-discharging Handymax tonnage and bulk cargo tug and barge transfers from ship to shore into inaccessible restricted Ports in the Caribbean. Research and Consulting services provided to the Cayman Islands Government on shipping and port development.

July 1990 to Present: **International - Shipping, towage, marine, ports, consultant, general business consultant, residential designs, construction and development.**

Magellan Group - Self employed – **Magellan Holdings Ltd.**
Magellan Development Holdings Ltd.
Magellan & Associates – (Trading Name only)

Managing Director - Cayman based International consultancy comprising of John MacKenzie as sole principal partner and specializing in consulting on business development and acquisitions to the shipping and marine industries involving shipping, towage, tugs & barging, ports, marine, vessel new buildings, chartering, surveys, ship repair, dockings, ship design and ship brokering, together with general business material handling and logistics. Provided consulting in the USA, Canada, Norway, Australia, Cayman & the Caribbean.

Some highlights have been as consultant for Patricks, Australia on evaluating their possible entry into shipping in Bass Strait. Consultant for Steiner Shipyards in the US. Consultant to OKB Shipping and Nordvestconsult in Norway. Consultant to Ugland Capital Partners and the Ugland International Shipping Group and have provided consulting services to the Cayman Islands Government.

General consultant to the Viking Seaways Group in the design and development of Viking Seaways ferries and roll on / roll off vessels for operation between the US, Mexico and Central America. Designed a series of multi-purpose container feeder vessels. Designed the future port and port development proposal for South Dock in Providenciales, Turks & Caicos for Coxco Construction and the TC Government. The design has been adopted by SHAL as advisers to the TC Government. Consulting services on the port design and the National port development plan for the Cayman Islands. Neither port development projects have proceeded to date.

June 96 to July 2000: **Cayman Islands, B.W.I.**
Thompson Shipping Group of Companies – Purchased by Tropical Shipping in 1996.
General Management - US/Caribbean Shipping Group which includes both Thompson Shipping and Kirk Freight Line as vessel operating liner service, ocean carriers to the Cayman Islands and providing operational liner service management and agency services to the new US principals, Tropical Shipping &

Construction.. Responsible for ship management, crewing, chartering and operations of owned and chartered tonnage,. tug and barge management, operating containerized and roll on / roll off tugs and barges to the sister islands and tugs and barges carrying bulk construction aggregates from Cuba and Jamaica to the Cayman Islands and the Turks & Caicos Islands. Chartering and ship operations, ship and port agencies. Carried out dry-dockings and repairs including the replacement of main engines in vessels.

Jan 88 to **USA and Grand Cayman - Cayman Islands, B.W.I.**
June 96: **Kirk Freight Line Ltd.** - USA & Grand Cayman, Cayman Islands, B.W.I.
Managing Director - US/Caribbean Shipping Company. Vessel operating ocean carrier providing door to door intermodal services throughout North America including Canada, to the Caribbean, concentrating on a two sailings service each week to the Cayman Islands. Providing connecting carrier shipping services throughout the world with all the major international shipping lines. Also responsible for vessel chartering, tug and barge operations, ship / port agencies and projects for the shareholders group of companies. Company was purchased by Tropical Shipping in 1996

Jan 88 to **USA and Grand Cayman - Cayman Islands, B.W.I.**
June 90: **Kirk Line Ltd.** - USA , Caribbean Basin and the Cayman Islands
General Manager and Superintendent Engineer - US/Caribbean Shipping Company. Ship owner and operating, ocean carrier providing door to door intermodal shipping services throughout the Caribbean from North America and Canada. Providing connecting carrier shipping services throughout the world, to and from the Caribbean. Concentrating on weekly sailings from the US to the following ports. Also simultaneously responsible for total vessel operations and management, crewing, repairs, maintenance and dockings together with the responsibilities of running the Cayman Islands liner services and vessel agencies. Carried out major repairs, vessel re-constructions and main engine re-buildings.

Grand Cayman-Cayman Islands, Kingston-Jamaica, Montego Bay-Jamaica
Port au Prince-Haiti, Rio Haina-Dominican Republic, Jamaica to the Cayman Islands.

Oct 86 to **USA and Grand Cayman - Cayman Islands, B.W.I.**
Jan 88: **Kirk Line - R.B.Kirkconnell & Bro. Ltd.** - Established in 1896 & sold in 1988.
Assistant Manager and Superintendent Engineer - US/Caribbean Shipping Company. The oldest and most well respected shipping line in the Caribbean. Servicing the USA & Caribbean Basin Area with weekly shipping services. Ship owner and operating ocean carrier, providing door to door intermodal shipping services throughout North America, Canada and the Caribbean. Established in its trades with weekly sailings from the USA to the following ports in the Caribbean. Also responsible for chartering, vessel agencies, vessel operations, and management including vessel repairs, maintenance and dockings.

USA to Kingston - Jamaica, USA to Montego Bay - Jamaica, USA to Port au Prince - Haiti, USA to Grand Cayman, Cayman Brac, Little Cayman, Jamaica to the Cayman Islands.

Dec 84 to **Sydney, Melbourne and Tasmania - Australia**
Aug 86: **Brambles Shipping - Shipping Division - Brambles Industries Pty. Ltd.**
General Manager / Divisional manager - Australian coastal shipping company. Responsible for the initial establishment, implementation, business development and management of the total operation incorporating vessel liner services, cargo operations, freight, sales, marketing, port terminal, stevedoring and transportation operations for Brambles Shipping. Provided the project research and due diligence,

developed the business plan, presented proposals, procured all capital assets in the operation, purchasing the vessel, vessel conversion in Singapore, purchasing or manufacturing 120 roll trailers, two pallet wide containers, side curtain road trailers, terminal tractors from Europe, design and development of two ports, warehouses, offices, union negotiations with all the maritime unions, terminal operations, stevedoring, contracts, and the integration of Seacargo – as Freight Consolidators, MacArthur Shipping Agencies, and Chep Equipment Division as associated inter company divisions involved with or providing services in the operation.

Carried out negotiations, lobbying and meetings with the Tasmanian Government, Federal Government, Minister of Transport, and all maritime unions to successfully establish the company and commence operations. Operated daily sailings as a major coastal shipping line with over night services between Melbourne Victoria and Burnie Tasmania. Reporting directly to the Managing Director and the senior executive director of Brambles Industries Australia and Brambles International.

May 83 to Dec 84: **Sydney - Australia with nationwide and worldwide travel.**
Brambles Industries Pty. Ltd. - Commercial Division

Project Manager / Technical Manager / Commercial Advisor, working closely with the Commercial Manager, and reporting directly to the Managing Director and Senior Executive Directors of Brambles Australia and Brambles International. Project, commercial and technical responsibilities, evaluating and advising on acquisitions, conducting feasibility studies, reviewing new projects, making presentations to the board and directly responsible for the establishment of a new shipping division for the company's entry into Australian coastal shipping.

Directly responsible for the business development, organization, co-ordination, and overall management of the project. Directly and personally responsible for the purchase and conversion of vessels, purchase of vessel and port terminal equipment, design, development and construction of ports in Melbourne Victoria and Burnie Tasmania, operating contracts and agreements, discussions and negotiations with Federal and State governments, negotiations and agreements with seagoing, waterfront and labour unions, management and employment of staff, seagoing personnel, stevedoring terminal labour, and industrial unions.

Responsible for the conversion and operation of the vessels and the introduction and operation of port terminal equipment. Introduced double stacking, roll trailer technology and 4x4 terminal tractors into Australia to establish the most efficient short sea trade operation in the country. Also responsible for the development and management of the company's capital investments and the incorporation of other Brambles inter divisional involvement in the project as associated operations involved in the new shipping division. This included Seacargo Freight Consolidators (Brambles), MacArthur Shipping Agencies (Brambles), Chep Equipment (Brambles), Patrick Stevedoring (Terminals), Brambles Shipping and the Tasmanian Government.

Feb 81 to May 83: **Sydney - Australia**
J. Fenwick & Co Pty. Ltd. - (Brambles Marine / Towage Division)

Superintendent Engineer managing Brambles Marine / Brambles Towage Divisions' new ship building program, constructing four azimuth drive ship handling / deep-sea tug/salvage, towage vessels. As under study for the retiring Technical Manager to assume his position on retirement, I was responsible for the management, operation and maintenance of the company's nationwide fleet of vessels which included ship handling tugs, salvage tugs, line boats, tugs and barges. Responsible for the new building program

and the introduction of new azimuth drive / Z-peller tractor tug technology into Australia incorporating single line bow, split drum and traction type winches. United Salvage, Waratah Towage and Howard Smith Towage soon followed with their independent new building programs following the completion of the Fenwick new buildings.

Nov 79 to Feb 81: **Sydney - Australia and nationwide.**
American Bureau of Shipping
Invited to join Lloyd's Register of Shipping - Accepted the American Bureau of Shipping offer. Marine and Industrial surveyor for one of the worlds major classification societies. Survey responsibilities Australia wide in the offshore oil industry, salvage, towage, new ship construction, coastal and international shipping industry, and general domestic shore based industrial / commercial industries. Responsible as a surveyor for American Bureau's vessel new building programs in Newcastle, Australia. Relieved follow surveying staff and temporarily ran the organization's Western Australian office, solely covering all of Western Australia, representing over 33% of the country.

May 73 to Nov 79: **Worldwide International Shipping Industry** - Ship's Engineer Officer
Major Shipping Companies - Seagoing Ship's Engineer Officer

Howard-Smith Industries Pty. Ltd.	- 1977,1979 - Chief Engineer Officer - Tankers
Mobil Oil Company (International Division)	- 1976,1977 - Senior Engineer Officer - Tankers
Howard-Smith Industries Pty. Ltd.	- 1975,1976 - Senior Engineer Officer - Tankers
P & O Australia Pty. Ltd.	- 1974,1975 - Refrigeration Engineer - Container
P & O Australia Pty. Ltd.	- 1973,1974 - Junior Engineer Officer – Cont/Pass
Howard-Smith Industries Pty. Ltd.	- 1973,1973 - Junior Engineer Officer - Tankers

Important Note:
Tanker seagoing service with Mobil Oil and Howard Smith Industries involved a number of years serving as a Chief engineer and senior engineer officer on solely oil tankers ranging from 25,000 DWT product tankers up to 250,000 DWT VLCC crude oil carriers

P.O. Box 31194 SMB. Grand Cayman, Cayman Islands, B.W.I.

Appendix 1 – Trip and Tow Survey from Feb. 2008

YACHTS
COMMERCIAL CRAFT
MARINE FACILITIES

COASTAL MARINE SURVEYS
KINSEY MARINE, LLC

ANDREW KINSEY, AMS, S.A.M.S
&
EDWARD J. VIOLA, CMS, N.A.M.S

March 11, 2008

Dominion Marine Group
P.O. Box 152
Chincoteague Island, VA 23336-1838
Attn: Tim Mullane

TRIP IN TOW SURVEY REPORT

THIS IS TO CERTIFY THAT on 28 February, 2008, the undersigned surveyor did, at the request of Dominion Marine Group, make inspection of ASR-13 "USS KITTIWAKE" for the purpose of determining its suitability to endure a voyage, in tow of the Tug MICHAEL J . MCALLISTER and the Dominion Marine Group tugs AMERICAN DREAM and AMERICAN PRIDE as escorts, from the James River Reserve Fleet to the Dominion Marine Group facility on the Eastern Branch of the Elizabeth River.

Tug MICHAEL J. MCALLISTER

LENGTH	: 109.5' (registered)
BREADTH	: 34.1'
DEPTH	: 13.6'
OFFICIAL NO.	: 536628
GROSS TONS	: 188 (registered)
NET TONS	: 127 (registered)
ENGINE(S)	: Twin Screw Diesel
HORSEPOWER	: 4,100
BUILT	: 1971, Halter Marine Service, Pascagoula, MS.
OWNER	: McAllister Towing and Transportation Co, Inc. 17 Battery Place, NY NY 10004.
CREW	: (3), including licensed master, engineer and deckhand.

Tug AMERICAN PRIDE

LENGTH	: 81.7' (registered)
BREADTH	: 25'
DEPTH	: 10.9'
OFFICIAL NO.	: 263869
GROSS TONS	: 149 (registered)
NET TONS	: 63 (registered)
ENGINE(S)	: Single Screw Diesel
HORSEPOWER	: 1,700
BUILT	: 1952, Alexander Shipyard, Inc., New Orleans, LA.
OWNER	: Mullane Bros Marine Trans LLC, 425 Campostella Rd, Norfolk, VA 23523.
CREW	: (3), including licensed master, engineer and deckhand.

P.O. BOX 430 ✧ MATTITUCK, NY 11952 ✧ PHONE: 631-298-9518 ✧ FAX: 631-298-5282 ✧ COASTALMARINE@OPTONLINE.NET

 VESSEL: KITTIWAKE (ASR-13)

Tug AMERICAN DREAM

LENGTH	: 79.5' (registered)
BREADTH	: 20.1'
DEPTH	: 10.1'
OFFICIAL NO.	: 261303
GROSS TONS	: 120 (registered)
NET TONS	: 81 (registered)
ENGINE(S)	: Single Screw Diesel
HORSEPOWER	: 1,100
BUILT	: 1951, Chesapeake Marine Railway, Baltimore, MD.
OWNER	: Mullane Bros Marine Trans LLC, 425 Campostella Rd, Norfolk, VA 23523.
CREW	: (3), including licensed master, engineer and deckhand.

KITTIWAKE (ASR-13)

DOC. NO.	: None, ex public vessel.
OWNER	: Department of Transportation, Maritime Administration.
LENGTH	: 251.6'
DEPTH	: 14.8'
BREADTH	: 42'
GROSS & NET TONS	: 1,642.82 LT as per National Cargo Bureau Draft Survey.
BUILT	: 1945, Savannah Machinery and Foundry Co., Savannah, GA
DEPARTURE DRAFTS	: 11' 0" Fwd, 12' 0" Aft
AIR DRAFT	: 126'

Description

USS KITTIWAKE was one of the CHANTICLEER - class Submarine Rescue Ships. Both decommissioned and stricken from the Navy list on September 30, 1994, the USS KITTIWAKE is since then laid up in the National Defense Reserve Fleet, James River, Fort Eustis, Va.

She is all welded steel construction with fine entry and tapered stern. Hull plating was found intact as viewed with vessel afloat and she was floating evenly on her lines. Visible draft marks are painted on the hull at both bow and stern for quick visual identification of any change in draft.

Vessel has closed chocks forward, aft and on side decks. On the bow, stern and side decks are 10" cast double bitts fitted securely with welds intact. On the stern substantial cleats are welded to the deck by doublers.

Inspection of the vessel was carried out with below deck machinery spaces inspected and installation of blanks on sea chests verified. Global Associates of Portsmouth, VA completed the blanking of all below water line valves in October of 1998. There is full documentation of this on file at the MARAD Fort Eustis office. Subject file was reviewed following onboard survey. In addition to the blanking of skin penetrations the shaft was verified as being locked in place at the reduction gear. The rudder

was found to be locked in place through the use of a split pipe installation. The reduction gear and rudder locking was found to be suitable for transit on protected waters.

In addition the machinery space inspection found the fuel system to be broken and drained. A cleaning report from PetroChem Recovery Service, dated July 7, 1997, reports the vessel to be in a clean and gas free state. Our inspection supported this report. All boilers and pressure vessels where found purged and opened. Machinery space inspection found no loose gear.

Main and upper deck inspection found equipment secure. The upper deck fendering was found secured through the use of bottle screws. Blocks in cross trees where found secure base on visual inspection from deck level. The boom sections secured on the stern quarters are currently strapped in place. This stowage is suitable for transit on protected waters.

Based on conditions observed at time of survey, and information obtained from Dominion Marine Group, the KITTIWAKE has a current fair market hull valuation of $400,000.

Towing Gear

MARAD will direct the vessels removal from the nest. Following removal from the nest, transfer will take place and the vessel with placed “on the hip” of the MICHAEL J . MCALLISTER with the assist tugs transiting along side. Assist tugs will carry onboard damage control dewatering pumps as well as oil pollution remediation equipment.

Route

Depart the James River Reserve Fleet and proceed down bound on the James River. After transiting the James River Bridge and Monitor Merrimac Bridge Tunnel cut out proceed through Hampton Roads and southbound on the Elizabeth River.

Weather Parameters

The tow shall not proceed from safe harbor or shall immediately seek refuge when weather exceeds or predicted to exceed:

SUSATAINED WINDS: 28 Knots

SEA STATE: 4 to 5 Feet.

Recommendations

1. The practice of good seamanship shall be observed at all times, particularly in the careful handling of the tow, with courses and speeds chosen to minimize rolling, pounding and excessive surge load.

2. Due to our concern for the size and dimensions of the tow, we recommend that the speed through the water shall not exceed eight (8) knots.

PAGE *4 of 4* **VESSEL**: KITTIWAKE (ASR-13)

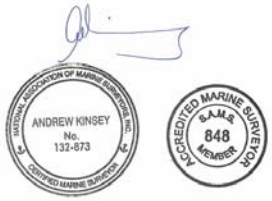
3. All lights and shapes as mandated by the Rules of the Road, shall be properly displayed on the tow at all times.

4. Out fitting the towed vessel with fire extinguishers and personal protective safety equipment, including PFD's and 1st aid / trauma kit.

5. A copy of this properly executed document, as well as a copy of the USCG COTP approval letter, shall be maintained in the towing vessel log book for the duration of the subject voyage.

With due regard for the conditions set forth in this document, we consider the tug and tow to be reasonably fit for the intended voyage.

Acknowledgements:



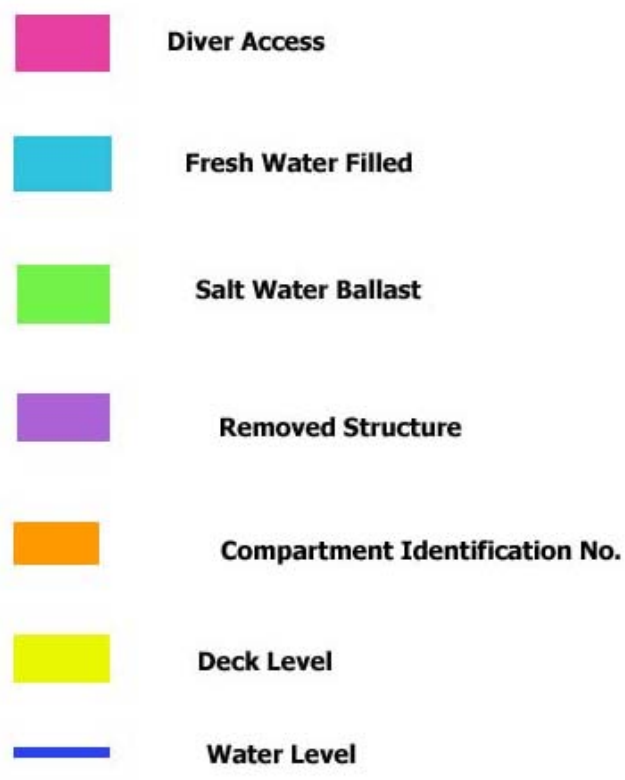
On Behalf of Dominion Marine Group

Andrew Kinsey, Maine Surveyor
Signs without prejudice

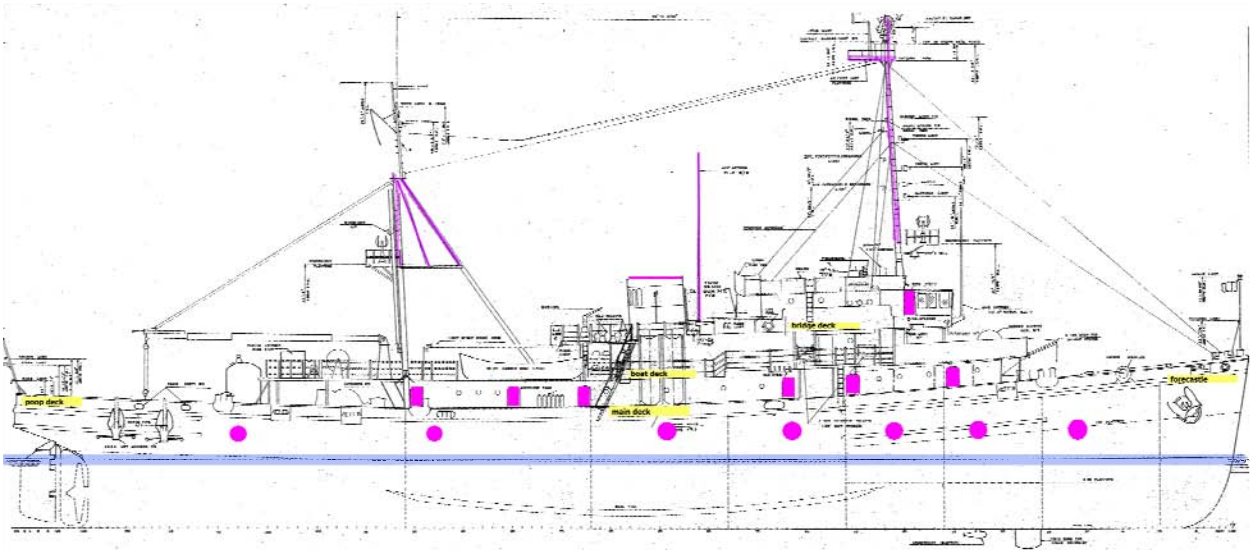
Appendix 2 – General Arrangements of the ASR-13 Kittiwake including designation of all cutouts and ballast waters

(Provided in hard copy format also)

Kittiwake General Arrangement Legend



Kittiwake General Arrangement – Exterior Profile



Kittiwake General Arrangement – Inboard Profile